Correlates of Prenatal Coparenting and Maternal Gatekeeping

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By
Carolyn Reed

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Project Adivsors: Sarah J. Schoppe-Sullivan, Assistant Professor
Claire M. Kamp Dush, Assistant Professor
Department of Human Development and Family Science

Abstract

The familial roles of men and women are changing. As the percentage of mothers working outside the home has increased, so have expectations for men as fathers. Additionally, studies show many benefits for children of highly involved fathers. Still, research reveals that fathers are less involved with children than mothers, especially with infants. Many factors impact the level of father involvement, including the coparenting relationship (the amount of support and cooperation between parents) and mothers' beliefs and behaviors. Researchers argue that mothers may act as "gatekeepers," either hindering or facilitating fathers' efforts to become involved. Although some research supports the existence of maternal gatekeeping and its effects on father involvement, little is known about the antecedents of gatekeeping behavior. The purpose of this study was to identify characteristics that predict prebirth maternal gatekeeping and coparenting. Data were collected from 56 first-time mothers during the third trimester of pregnancy as part of a larger research project. Participants completed questionnaires measuring: (1) level of education; (2) quality of parenting in the family of origin; (3) ambivalent sexism; and (4) beliefs about parental roles. Additionally, to assess coparenting and mothers' prenatal gatekeeping, they and their partners participated in a videotaped interaction in which they pretended to "parent" their new baby (a lifelike doll) together. This task has been validated by research, which shows that couples' interactions during this situation predict their real interactions after the birth. Mothers with a higher level of education, more adaptive coparenting in the family of origin, and less benevolent sexism were more likely to come from families with more warm and cooperative coparenting. No factor was able to predict maternal gatekeeping prebirth.

Introduction

The Current State of Fatherhood

The familial roles of men and women are changing. With the rise of feminism and the increase of women in the workforce since the 1970s, the expectations and opportunities for fathers to take part in family life have increased. No longer are fathers restricted to the role of distant breadwinners as in the early twentieth century, and unlike in the 1950s and 1960s, it is not enough to provide financial support for the family and gender socialization for sons. Instead, the ideal modern father shares the burden of childcare with his wife or partner because it is fair and because he is no less capable of family work than she (Pleck & Pleck, 1997). However, critics of the ideal argue that this modern father does not exist. While couples may value gender equality—and even live equally before the birth of a child—once partners become parents, they must work against conventions in the workplace or the customs of family and friends to move towards the modern, egalitarian model (Deutsch, 2001). This tension between the cultural ideal and reality has sparked an interest among researchers in the factors that facilitate a father's involvement in child rearing.

With a myriad of studies revealing the multiple benefits of paternal participation, this interest in fathers is not surprising. Various aspects of paternal behavior including the time a father spends monitoring children, the amount of emotional support he lends, and the amount of physical care for which he is responsible have been examined, each strengthening the opinion that positive paternal interactions of many forms are beneficial to children (Marsiglio, Amato, Day, & Lamb, 2000). Advantages observed in children range from higher academic achievement in adolescents to greater earning potential as

children grow into adults, especially when father engagement is combined with high levels of maternal involvement (Pleck & Masciadrelli, 2004). Lower levels of externalizing problems, such as delinquency and aggression, as well as internalizing problems, such as depression and anxiety, are associated with greater paternal involvement as well, and these benefits have been shown to be consistent across racial, ethnic, and social class lines (Marsiglio et al., 2000). Furthermore, the benefits of high father involvement extend into the marital system. A more equitable division of labor as perceived by mothers combined with the higher levels of satisfaction and competence experienced by involved fathers have been shown to increase marital quality (Pleck & Masciadrelli, 2004).

However, in a time when the role of the father is viewed as more valuable and critical than ever, fathers remain consistently less involved with children than mothers, even when the mother is employed (Allen & Hawkins, 1999). A review of the literature reveals that, though progress has been made in recent decades, father involvement is still significantly less than that of mothers. This is evidenced both by responsibility for child rearing tasks as well as amount of time spent with children. While fathers may assume shared responsibility for some aspects of childcare, few are solely responsible for any (Hofferth, Pleck, Stueve, Bianchi, & Sayer, 2002), evidence for the mother as a "manager" of family work (Marsiglio et al., 2000). Furthermore, increases in time spent engaged with and accessible to children are minimal (Hofferth et al., 2002). Engagement only rose from 33% of the level of mothers in the 1970s to 43.3% in the 1990s. At the same point, fathers' accessibility averaged 65.5%, an increase of only 15% from the 1970s average. The proportion of time fathers spent accessible to children in single-

earner families decreased over the period as well (Hofferth et al., 2002). Furthermore, as late as 2000, married fathers reported spending 7 hours per week directly caring for children, only slightly more than half of the 13 hours per week reported by married mothers (Bianchi, Robinson, & Milkie, 2006).

Maternal Gatekeeping

This paradox has led researchers to explore exactly what determines the level of father involvement. Several factors have been identified including the father's motivation to be a parent, his level of skill and confidence, and the support he receives from others, including the mother, to become involved (Doherty, Kouneski, & Erickson, 1998). This last factor, the role of the mother, is a fervently debated topic among researchers, its importance highlighted by the finding that there is little social support—both in social scripts and institutions such as the workplace—for father involvement outside of the marital system (Pleck & Masciadrelli, 2004). Furthermore, study data have revealed marital support to be unreliable, suggesting that as many as 60-80% of mothers do not want their husbands to be more active in childrearing. Instead, mothers may feel ambivalent towards the role of the father and accordingly make few motions to encourage his efforts (Pleck, 1993). Such evidence has led to the notion that mothers may act as "gatekeepers," either hindering or facilitating the father in his attempts to become involved (Beitel & Parke, 1998). This *maternal gatekeeping* "phenomenon" can be defined as the beliefs and behaviors exhibited by mothers that either prevent or allow fathers to become more involved with their children (Allen & Hawkins, 1999). Specific inhibiting behaviors include taking full control of child rearing tasks or criticizing the father's attempts to participate, whereas facilitating behaviors include encouraging the

father's efforts or arranging time for father and child to be together (Cannon, Schoppe-Sullivan, Mangelsdorf, Brown, & Sokolowski, 2008). This facilitation of paternal involvement is important for the development of a strong coparental relationship, which is characterized by support, affirmation, and collaboration between parents (McHale, 2007). Although maternal gatekeeping is often associated with traditional gender role beliefs, in egalitarian coparenting relationships, both men and women alike have had the opportunity to become competent in family work. Because the proportion of women in the workforce has increased without an equivalent rise in these more egalitarian relationships, research in the 1990s searched for explanations (Allen & Hawkins, 1999; Deutsch, 2001). A common focus was the relationship between maternal gatekeeping and father involvement.

In an early effort to explore the maternal gatekeeping model, De Luccie (1995) studied the effects of maternal characteristics—including satisfaction with employment status and social support—on father involvement. Results showed that maternal characteristics and marital satisfaction were able to explain 79% of the variance in father involvement. Other influential factors included maternal satisfaction with father involvement and child age, such that women with younger children who believed in the importance of the role of the father tended to be more satisfied with their husbands' level of involvement. This was in turn associated with higher levels of mother-reported paternal engagement. Additionally, when fathers were encouraged and supported both socially (by opportunities for advice and companionship) and by their wives, their levels of competence and involvement were higher, even with difficult infants. It is, however, important to note that this study was cross-sectional and that all factors were measured

using mother reports. This is likely to explain some of the association between maternal beliefs and satisfaction and paternal involvement. Still, this early research strengthened the assertion that mothers have the potential to influence paternal involvement and supported the notion of mothers as gatekeepers able to both open and close the gate.

Beitel and Parke (1998) furthered scholarly knowledge in a subsequent series of studies by examining the effects of both maternal and paternal attitudes on paternal involvement among first-time parents. Surveys asked women to report their beliefs concerning several aspects of fatherly engagement, including men's natural abilities to rear children as well as their husband's abilities to nurture. Results showed that among the most significant factors related to paternal involvement were maternal opinions of their husbands' motivation to care, beliefs in innate sex differences, and negative assessments of their husbands' ability to perform child-related tasks. Researchers then assessed fathers' self-perceptions of their role across the same dimensions considered by mothers. Similarly, beliefs in innate sex differences and self-assessments of the fathers' abilities to care provided an explanation for some of the variance in father involvement. Interestingly, the correlation between maternal attitudes and father involvement lessened when paternal reports were used to gauge father involvement rather than maternal reports. This suggests that it is a combination of factors from both parents that determines paternal involvement. Finally, a subset of the original couples participated in a third, observational study. Fathers played with infants in three segments, each with varying levels of maternal availability. A father's belief in the importance of his role was the best predictor for level of engagement throughout the episodes. However, both maternal and paternal beliefs in innate sex differences were able to explain a significant amount of the

variance. Additionally, when the mother was present but occupied her level of criticism (as reported by fathers) influenced paternal involvement. Through the use of observational methods and reports from both parents, this investigation was able to strengthen the evidence for a link between maternal beliefs and behaviors and level of father involvement, aligning with the maternal gatekeeping theory.

Soon after, a study by Allen and Hawkins defined several components of maternal gatekeeping and used them to classify women into three categories: gatekeepers, intermediates, and collaborators (1999). This unique approach allowed researchers to identify "gatekeepers" and compare them to other women, making a previously ambiguous construct more measureable. "Gatekeepers" were defined as women high on three aspects that had historically guided men's and women's participation in family work: standards and responsibilities for childcare, maternal identity confirmation, and differentiated family roles. As predicted, gatekeeping women spent on average 8 hours more per week on domestic labor and had less involved husbands than women in the other groups. This trend persisted even when more traditionally "male" duties, such as home repairs and yard work, were included in the definition of domestic labor.

More recent research has lent additional support to these early findings. Fagan and Barnett (2003) compared the impact of maternal beliefs and behaviors on paternal involvement among two groups, families receiving child welfare services and families not receiving such services. Interestingly, maternal beliefs in paternal competence were most strongly correlated to level of father involvement, regardless of welfare status. Families were eligible for services because of previous accounts of child abuse or neglect, so it was hypothesized that mothers would be more likely to prohibit fathers

from being involved with these children. This was not the case. Rather, only when the mother thought the father capable enough to partake in family work was father involvement higher. This trend persisted even when mothers valued the role of the father, such that many mothers in the sample believed in the importance of fathers, but still perceived their partners as incompetent and thus discouraged their involvement. Therefore, even with a small convenience sample and solely mother-report methods of data collection, this study used populations especially susceptible to gatekeeping to obtain a significant association between maternal gatekeeping and father involvement. Additional research improved upon these understandings by including reports from both parents. McBride et al. (2005) measured the moderating effects of perceived value of the paternal role in both parents on the relation between the father's investment in parenthood and his involvement. Results showed that a father's level of commitment to the paternal role was only correlated to his level of involvement if the mother also valued his role. These results gave credit to the notion that maternal attitudes affect fatherly engagement by linking the mother's beliefs to the amount of accessibility to the child she permits her husband. Interestingly, when the mother believed her husband's contribution dispensable, his level of commitment became irrelevant.

Perhaps the best evidence for the existence and effects of maternal gatekeeping has been provided by the most recent research. In a longitudinal study, Schoppe-Sullivan, Brown, Cannon, Mangelsdorf, and Sokolowski (2008) observed couples during the transition surrounding a child's birth in order to observe the establishment of parenting patterns. As predicted, when parents perceived their coparenting relationship more positively, mothers were high on encouragement of fathers. Higher maternal

encouragement was in turn associated with greater father involvement, suggesting that maternal encouragement may mediate the relation between quality of coparenting and father involvement. Fathers' progressive beliefs about the role of the father (measured during the third trimester) were also able to predict paternal competence and engagement. However, maternal gatekeeping was found to be a moderator of this relationship, such that when mothers frequently engaged in criticism, fathers' progressive beliefs were no longer associated with greater paternal involvement. This study was unique in its use of observational methods (rather than parent reports) to measure paternal involvement—a method that had only been used once before by Beitel and Parke (1998). Thus, though the association between maternal gatekeeping and father involvement appeared small, this research furthered the understanding of the effects of these behaviors.

Another recent study further strengthened the belief in an association between gatekeeping behaviors and father involvement (Gaunt, 2008). Researchers used Allen and Hawkins' (1999) three-part model of maternal gatekeeping to examine the effects of these beliefs and behaviors on maternal and paternal reports of time fathers spent alone with children. As predicted, mothers who tended to engage in gatekeeping also spent more hours as solo care providers, at the expense of father involvement. Though the study was cross-sectional, making conclusions about the direction of these associations tentative at best, the presence of an association between the two variables was clear.

These recent studies as well as the early research have shown the potential for maternal gatekeeping to influence father involvement across several domains. Paternal competence, time spent engaged with and accessible to children, and responsibility for childcare tasks have all been shown to fluctuate along with maternal attitudes and

behaviors. Because of the underexplored (yet potentially significant) power of maternal gatekeeping to influence family life, the factors preceding and defining the construct, which have yet to be sufficiently understood, are now the focus of much research.

The Gatekeepers

Early work by Allen and Hawkins (1999) sought to confirm their conceptualization of maternal gatekeepers as mothers with high standards for childcare, desires for validation in the maternal role, and beliefs in dividing family labor along gender lines. Women reported the degree to which they possessed these characteristics in surveys and described their allocation of family work in time reports. Results confirmed the hypotheses, as women high in all three aspects, and who were therefore categorized as "gatekeepers," enjoyed their influence in the domestic domain, spent more time doing family work, and had less involved husbands. Thus, the characteristics of these "gatekeepers" became important foci for subsequent studies of the antecedents of maternal gatekeeping.

Specifically, work by Gaunt (2008) used the Allen and Hawkins (1999) conceptualization to further assess maternal gatekeeping and its antecedents within a large sample of Israeli women. Mothers responded to the Allen and Hawkins measure of maternal gatekeeping as well as measures of self-esteem, need for power in the home, desire to affirm the gendered self, and need to validate maternal identity. As predicted, results showed that mothers with low self-esteem, strong female gender orientation, and high identification with the maternal role also scored higher on the Allen and Hawkins measure of gatekeeping. Additionally, the lower a mother's satisfaction with work outside the home, the higher her standards for childcare and gatekeeping tendencies.

These results appear to suggest that women not receiving validation outside the home seek it through family work, one explanation for maternal gatekeeping.

The work on maternal gatekeeping has explored other possible antecedents as well. In a recent longitudinal study, Cannon et al. (2008) used innovative observational methods to uncover relations between maternal and paternal personality characteristics, beliefs about fathers' roles, parents' experiences in their families of origin, maternal gatekeeping, and paternal involvement and competence. Researchers observed parents interacting together with their infants and specifically watched for maternal negative control, or attempts to limit the father's involvement, and maternal facilitation, or support for the father's involvement. High interpersonal orientation in mothers (as measured before the birth of the child) predicted lower levels of paternal competence and involvement. Additionally, when mothers idealized their parents, fathers were less involved in childrearing tasks. It has been suggested that this is because idealization of parents is a symptom of defensiveness due to an insecure attachment style. This insecure attachment style may hinder the development of positive parenting patterns in the current family, one explanation for lower paternal competence. Negative emotionality in mothers was also associated with higher levels of maternal negative control, but only when fathers also held traditional beliefs about paternal roles. However, when fathers' beliefs were more progressive, the effect of mothers' negative emotionality on maternal negative control decreased. These studies, along with other research specifically on dual-earner couples—which some believe may be particularly affected, as mothers acting as both nurturers and providers may be more hesitant to give control over to husbands (Schoppe-Sullivan et al., 2008)—have furthered knowledge about the antecedents of

gatekeeping. It is possible that the patterns and attitudes that shape interactions after birth are formed early, even prenatally, and last well into the child's life.

This possibility was investigated in a study conducted by Van Egeren (2003) addressing prebirth factors that predict the development of coparenting across the transition to parenthood. Factors studied included demographic characteristics, aspects of the personality including ego development and reactance, assimilation of the parental role, cohesion of beliefs about child rearing, and experiences with coparenting in the family of origin. Parents also completed a survey identifying the degree to which their parenting relationship was characterized by support, cooperation, and respect. Results showed that higher education level and socio-economic status as well as maternal ego development (the ability to take on other perspectives) were all positively associated with the development of a successful coparenting relationship. In contrast, a high level of concern before birth in mothers was associated with less effective coparenting patterns, a finding supported in other studies as well (McHale, Kazali, Rotman, Talbot, Carleton, & Lieberson, 2004).

Interestingly, the study found men to be more affected by their experiences within the family of origin. Fathers who reported a positive coparenting relationship between their parents were more likely to report a successful coparenting relationship with their partner than women with similar experiences. One explanation for this is that the role of the father is less socially scripted, so men benefit more than women from a positive role model. This possibility has exciting implications for clinical practice or prenatal classes and deserves further attention.

Subsequent research by Stright and Bales (2003) provided further insight into the nature of coparenting, including the role of coparenting experiences in the family of origin. An observational study of couples with one child between the ages of 3 and 5 examined the contributions of both parent and child to the developing coparenting relationship. Factors studied included the age, temperament, and gender of the child, as well as the parents' personality, education, and quality of coparenting in the family of origin. Stright and Bales found no association between characteristics of the child and differences in quality of coparenting, though this finding is inconsistent with other studies which have shown poorer coparenting among couples with preexisting low marital quality and difficult infants (McHale, Kazali, Rotman, Talbot, Carleton, & Lieberson, 2004; Schoppe-Sullivan, Mangelsdorf, Brown, & Sokolowski, 2007). This study found another interesting pattern with respect to the quality of coparenting in the family of origin. Among partners with lower educational attainment, the quality of coparenting mirrored that of the mothers' parents. This suggests that these mothers are using their own experiences as a model for current family interactions. However, these effects diminished as level of education increased such that mothers who were highly educated were able to develop successful coparenting relationships regardless of coparenting in the family of origin. Education may have allowed these mothers to replace faulty intergenerational models with more positive ones. Though this study was limited by its small sample size, this pattern once again indicates the possible benefit of education for new parents and deserves further investigation.

The Transition to Parenthood

The current study focuses on the transition to parenthood, and specifically examines prebirth mother characteristics that may predict the potential for gatekeeping and therefore reduced father involvement. This is a particularly critical phase in the family lifespan, as high levels of stress and uncertainty often result in couples adopting more traditional gender roles (Deutsch, 2001) or more frequently experiencing conflict. Some empirical evidence suggests that the level of conflict during pregnancy is especially critical, with major implications for relationship quality after the birth (Kluwer & Johnson, 2007). Additionally, patterns established during the transition to parenthood as well as parents' expectations for the future family have been found to considerably influence family interactions, even as late as the child's preschool years.

Early work by McHale et al. (2004) gave credit to the use of prebirth factors to predict later family interactions. Expectant parents were asked to describe their hopes, aspirations, and concerns for their future families during individual interviews. These predictions, along with measures of marital quality, were analyzed in relation to observed postnatal adjustment. In families with fewer maternal concerns about future family work and interactions as well as lower paternal negativity, greater postnatal cooperation and warmth were observed. Additionally, more positive mental representations in expectant parents were correlated with higher marital quality both pre- and postbirth, a factor that also explained some of the variance in adjustment across the transition to parenthood. These factors were shown to be reliable predictors of postbirth adjustment, suggesting that the influence of parents' prebirth qualities and mental representations is strong, stable, and resilient.

This conjecture was further explored by von Klitzing and Bürgin (2005), who used similar interviews to link parents' conceptions of the future child and family relationships to the quality of later interactions. Expectant couples were asked to relate their childhood experiences of family, the emotionality of pregnancy, as well as their predictions for the unborn child and the ensuing change in family life. Interviews were then coded for "triadic capacity," determined by the degree to which partners incorporated one another in their imaginings and displayed flexibility in comparing these fantasies to reality. A high triadic capacity prior to the birth of the child was able to predict more positive family interactions postbirth and fewer mother-reported externalizing problems in preschool-age children.

Further work by Favez, Frascarolo, and Fivaz-Depeursinge (2006) used both prenatal and postnatal versions of the Lausanne Trilogue Play to further assess this stability of prebirth factors. The ability of parents to support and collaborate with one another during triadic play remained largely constant from the fifth month of pregnancy up until the child was 18 months old. Couples were found to be either able or unable to interact as a threesome with their infants, a characteristic detectable even prior to the birth when parents were asked to play out their imaginings of the future family. The findings in these studies are further supported by a review of the literature, which stresses the stability of patterns in parenting established in infancy as well as the importance of early family interactions for later child development (McHale & Fivaz-Depeursinge, 1999; Frascarolo, Favez, & Fivaz-Depeursinge, 2003).

As the transition to parenthood is an irrefutably critical period in family development, the factors affecting successful navigation of this transition require further

investigation. Coparenting and maternal gatekeeping may influence postnatal father involvement and are therefore important factors to consider. By examining these construct and their antecedents prebirth, the nature of coparenting and maternal gatekeeping may be better understood. Though no existing research has examined gatekeeping prior to the birth of the child, the stability of other related factors across the transition to parenthood (e.g., triadic capacity, collaboration and support, or negativity), suggests the potential value of such an investigation. Furthermore, the literature suggests that mothers' characteristics, including level of education, coparenting in the family of origin, beliefs about parental roles, and ambivalent sexism, will be important predictors of coparenting and maternal gatekeeping measured prenatally.

Education. Research suggests that education can have both direct and moderating effects on coparenting and maternal gatekeeping. Van Egeren (2003) found that mothers tended to be more satisfied with father involvement when fathers were highly educated. Multiple studies have found that mothers with lower levels of education have higher tendencies toward negative control of father involvement (DeLuccie, 1995; Gaunt, 2008). Additionally, Stright and Bales (2003) found an interaction between maternal level of education and quality of coparenting in the family of origin in relation to the quality of the current coparenting relationship. Poor coparenting in the family of origin was found to only be related to the quality of the current coparenting relationship when mothers had lower levels of education. This may be because mothers with higher levels of education were able to replace any negative models from the family of origin. It is therefore important to consider education a personal resource for parents that can lead to better perspective taking abilities, more progressive beliefs about familial roles and

relationships (see Deary, Batty, & Gale, 2008), and more positive models for relationships. Thus, I expect that higher levels of education among mothers will be associated with higher quality prebirth coparenting, lower levels of maternal negative control and higher levels of facilitation. I also predict that expectant mothers' level of education will interact with other variables. Specifically, I anticipate that the quality of coparenting in the family of origin will only be associated with coparenting in the current relationship and expectant mothers' gatekeeping tendencies when mothers have a low level of education.

Coparenting in the family of origin. Research suggests that the quality of coparenting in the family of origin may be related to maternal gatekeeping behaviors. This is true of studies that have found that higher quality coparenting in the family of origin is correlated with more warmth and cooperation among parents, arguably because of its influence on prenatal expectations for the family (McHale et al., 2004; von Kiltzing & Bürgin, 2005). Additionally, as noted above, Stright and Bales (2003) found that the quality of coparenting in the mother's family of origin was more strongly associated with the quality of the current coparenting relationship when the mother had a lower level of education. Thus this remains an important factor for some mothers. Because multiple studies point to coparenting in the family of origin as an important antecedent of coparenting and maternal gatekeeping, I expect that a better coparenting relationship in the mother's family of origin will relate to a higher quality coparenting relationship, lower levels of maternal negative control and increased facilitation of father involvement.

Beliefs about parental roles. Maternal and paternal beliefs about the role of the father were among the earliest explored antecedents of coparenting and maternal

gatekeeping. Studies specifically examining the construct found maternal ambivalence toward the paternal role to be one of the characteristics defining gatekeepers (Allen & Hawkins, 1999; Gaunt, 2008). Other studies emphasize the importance of paternal beliefs, noting that when fathers value their role and believe themselves as capable as mothers, their involvement is high as well (Beitel & Parke 1998; Schoppe-Sullivan et al., 2008). Still other research contends that the contribution of paternal attitudes is moderated by maternal attitudes such that a father's commitment to the paternal role is only correlated to his level of involvement when the mother also values his role and thus provides for his accessibility to children (McBride et al., 2005). Though empirical evidence for the relative contributions of maternal and paternal beliefs to maternal gatekeeping and father involvement is not always consistent, the importance of parental beliefs is clear. Thus, I predict that more progressive beliefs about parental roles in mothers will be associated with a higher quality coparenting relationship, less negative control, and greater facilitation.

Ambivalent Sexism. For decades, scholars have associated sexism with hostile ideas that justify an aversion to or discrimination against members of a sex. However, a more modern interpretation argues that if the byproduct of sexism is the suppression of a group, most typically women, then another form of these prejudices must be considered (Glick & Fiske, 2001). This alternative facet is benevolent sexism, or the tendency to view women in a positive, yet restrictive light. Benevolent sexists believe that women are more "pure," "warm," and "nurturing" than men, but that these qualities require their protection by men, who are "strong," "independent," and "competitive" (Glick & Fiske, 1996). Such beliefs have been found to reinforce patriarchy in civilizations across the

globe, allowing men to gain greater influence in business and government, and calling for women to embrace their domestication or be met with hostility. Both benevolent and hostile sexist beliefs—also known as "ambivalent sexism" (Glick & Fiske, 2001)—are strongly tied to a person's perceptions of proper gender roles; thus they have the potential to affect family life. Based on this, and the few studies which have tied sexism and beliefs in the separation of gendered functions to beliefs about father involvement (Allen & Hawkins, 1999; Hoffman & Moon, 1999), I expect that a higher degree of ambivalent sexism in mothers will be associated with less warm and cooperative prenatal coparenting, increased prebirth maternal negative control, and decreased maternal facilitation.

Method

Participants

Participating families included a subset of 56 families recruited for a larger study on the transition to parenthood. Couples were recruited primarily through newspaper advertisements and childbirth education classes. To be eligible, couples had to be either married or living together and expecting their first child. Both partners must have been working full-time prior to the child's birth and planning to return to work within 3 months of the birth. Of the couples included in this thesis, 89% were married. The sample was largely European American (86% of mothers), with 7% of mothers identifying as Hispanic, 4% as African American, and the remaining mothers as Other race/ethnicity. Maternal age at the time of assessment ranged from 21 to 39 years, with a median of 30 years of age. Additionally, maternal education level ranged from vocational or technical school to PhD, with a median of a Bachelor's degree. The sample was relatively

economically advantaged, with household incomes ranging from $15,500 to $238,000 with a mean of $90,200 (*SD* = $46,000). The majority of mothers worked either 31-40 hours or 41-50 hours per week (51.8% and 37.5%, respectively), demonstrating that the sample was comprised of dual earner couples.

Procedure

Couples who agreed to participate in the larger study were assessed during the third trimester of pregnancy. Surveys tapping demographic information and expectant parents' beliefs, attitudes, and experiences with family life were either mailed to the couple's home or available online. Researchers also visited the couple's home to collect the surveys, conduct an interview, and collect observational data. Copies of all measures used in this study are included in the Appendix.

Prebirth assessment: Predictors of coparenting and maternal gatekeeping

Maternal level of education. Mothers completed a demographics questionnaire in which they selected the category that best represented their highest completed level of education from a list of choices including: Less that high school, High school or GED, Vocational or technical program, Some college, Associate's degree, Bachelor's degree, Master's degree, and Doctorate degree. For some analyses, mothers were grouped by low or high education. Low education ranged from some high school to some college, whereas high education included a bachelor's degree to PhD or Doctorate degree. 12 mothers fell under the low education category.

Coparenting in the family of origin. We assessed coparenting in the family of origin using a 12-item questionnaire developed and proven internally consistent (α = .75 for fathers and .83 for mothers) by Stright and Bales (2003). Using a 5-point scale (1 =

never, 5 = always), mothers reported the existence of supportive (e.g., "My parents used similar parenting techniques") and unsupportive ("My parents criticized each other's parenting") coparenting in their families of origin. Items addressing unsupportive coparenting were reverse coded, and all ratings were averaged. Higher scored indicate a higher quality coparenting relationship in the family of origin. Cronbach's alpha in the current sample was strong (α = .95).

Beliefs about parental roles. Expectant mothers completed an adapted version of the Beliefs Concerning the Parental Role Scale (Bonney & Kelley, 1996), which has shown reliability and validity in a study with a similar sample of dual-income families (α = .87 for fathers and .80 for mothers; Bonney, Kelley, & Levant 1999). Respondents rated how much they agreed or disagreed with 29 items (1 = disagree strongly, 5 = agree strongly) assessing parents' beliefs about the roles of mothers ("When a child becomes ill at daycare/school it is primarily the mother's responsibility to leave work or make arrangements for the child") and fathers ("It is equally as important for a father to provide financial, physical, and emotional care to his children"). The 3-item Belief in Innate Sex Differences in Ability to Nurture subscale of Beitel and Parke's (1998) Survey of First-Time Mothers was added to the measure. The items have shown predictive validity (Beitel & Parke, 1998) and address parents' beliefs in natural childrearing abilities of mothers and fathers (e.g., "Fathers have to learn what mothers are able to do naturally in terms of child care") along the same 5-point scale. Statements relating to traditional beliefs were reverse coded, and ratings were averaged to create a total score. Mothers with higher scores can be desciribed as more progressive in their beliefs about parental roles. Cronbach's alpha for the entire scale equaled .86 for the current sample.

Ambivalent Sexism. The 22-item Ambivalent Sexism Inventory (Glick & Fiske, 1996) asks respondents to rate the degree to which they agree with items addressing both hostile ("Women seek to gain power by getting control over men") and benevolent ("In a disaster, women ought to be rescued before men") sexism. The measure uses a 6-point scale (0 = disagree strongly, 5 = agree strongly) and has demonstrated reliability and validity in recent research (Glick et al., 2000). Summary scores were created separately for hostile (α = . 90) and benevolent (α = . 91) sexism by averaging the 11 items pertaining to each. All 22 items were then averaged to create an ambivalent sexism summary score (α = .94). Higher scores on each of the three scales indicate greater sexism.

Social Desirability. Parents completed the 10-item Social Desirability Scale (Crowne & Marlowe, 1960), which measures the likelihood that participants are selecting responses according to what is socially desirable, rather than truthful. Respondents answer either True or False to each statement. Items in which the response "True" indicates low social desirability (i.e., "there have been occasions when I took advantage of someone") were reverse coded, and all items were averaged to create a summary score. Higher scores reflect grater social desirability. Cronbach's alpha equaled .51 in the current sample.

Prebirth assessment: Measure of coparenting and maternal gatekeeping

During a home-based visit, couples were videotaped while engaging in the prenatal version of the Lausanne Trilogue Play (LTP; Fivaz-Depeursinge & Corboz-Warnery, 1999). Expectant parents were asked to sit in two identical folding chairs facing a small table. All task props were placed on a mat to ensure consistency (see Figure 1 for

task design). A researcher then introduced a doll with a weighted, lifelike body but an undefined face by pretending to be the delivery room nurse. He/she placed the doll in a small basket while the other researcher instructed, "We now need you to imagine the moment when the three of you meet for the first time after the delivery." Parents were asked to play in four segments, "First, one of you plays with the baby alone, you can decide who, then the other one plays with the baby alone. Then both of you play with the baby together, and finally, let him/her go to sleep and discuss what you have just experienced." Instructions were repeated to encourage parents to adhere to the structure of the task, but were sufficiently vague to allow each couple to role-play their own unique interpretation. Typical play episodes lasted 4 to 5 minutes.

I coded the videotapes along with a trained partner. We were each randomly assigned half of the tapes, overlapping on 43% to test for reliability. Gamma statistics were computed to test interrater reliability and are reported with the description of each scale. Dimensions assessed include maternal negative control, or attempts to exclude the father from interacting with the infant (e.g., saying, "Watch his head!"; $\gamma = .81$), and facilitation, or actions that support the father's involvement (e.g., saying, "You did so well. I know you're going to be a great father when the time comes!"; $\gamma = .67$). Scores ranged from 1 to 5. A lower score indicated fewer, less intense behaviors, whereas a higher score signified that both obvious and subtle behaviors were present throughout the interaction. We also rated mothers' and fathers' intuitive parenting along a 5-point scale. This dimension measures the frequency, number, and quality of behaviors identified in the literature as intuitive to parents (i.e., dialogue distance, baby talk, exploring the baby's body, etc.). Higher scores indicate that parents displayed behaviors more

frequently and naturally (γ = .81 for mothers; γ = .61 for fathers). Finally, expectant parents were rated for couple cooperation (higher scores indicating a lack of antagonism and interference as well as active efforts to involve and support one another; γ = .70) and family warmth (higher scores ascribed to parents who demonstrated shared humor, affection, and tenderness towards one another and the baby; γ = .77).

Results

Plan for Analysis

First, I computed descriptive statistics (means, standard deviations, ranges) for all study variables, including education, coparenting in the family of origin, beliefs about parental roles, ambivalent sexism, maternal facilitation, maternal negative control, mother's intuitive parenting, father's intuitive parenting, couple cooperation, and family warmth. Then, I addressed my hypotheses regarding predictors of coparenting and maternal gatekeeping by computing correlations with all predictor variables. I then repeated these analyses controlling for social desirability for all variables except level of education (which mothers are not likely to misreport). Finally, I conducted a series of hierarchical regression analyses to determine whether, as anticipated, mothers' level of education moderates the relation between coparenting in the family of origin and coparenting in the family of procreation and maternal gatekeeping. To test for this, coparenting in the family of origin and maternal level of education were entered together on the first step of the regression equations, followed by the Coparenting in the Family of Origin X Education interaction term on the second step. If the interaction term accounted for significant variance in the dependent variable (a particular aspect of coparenting or maternal gatekeeping), moderation occurred. Before the creation of the interaction terms,

all independent variables were mean-centered. To examine the nature of any moderation effects obtained, graphs were constructed according to procedures outlined by Preacher, Curran, and Bauer (2006).

Descriptive Analyses

Descriptive statistics were calculated for all study variables (see Table 1). Most maternal characteristics (including coparenting in the family of origin, benevolent sexism, and hostile sexism) had wide ranges, demonstrating variability in the sample. However, mothers on average reported highly progressive beliefs about parental roles (M = 4.30). Additionally, levels of maternal negative control were relatively low (M = 1.77), although examples of each scale point were present in the sample. Similar ranges were found for all other measures of prebirth coparenting and maternal gatekeeping with the exception of mother's intuitive parenting behaviors, which ranged from 2.00 to 5.00. This pattern affected the comparison of mothers' intuitive parenting to fathers', with mothers scoring 3.57 on average and fathers scoring 3.04 on average. This difference between mothers' and fathers' intuitive parenting was statistically significant, $t(55) = 4.39$, $p <$ .01.

Maternal Characteristics

Correlations were computed to test for relations between maternal characteristics and prenatal coparenting and maternal gatekeeping behaviors. Although several factors were found to predict aspects of the prenatal coparenting relationship (specificially mothers' and fathers' intuitive parenting, couple cooperation, and family warmth), no maternal characteristic was significantly related to maternal gatekeeping prebirth.

Still, interesting patterns relative to aspects of the coparenting relationship emerged (see Table 2). Maternal level of education was found to be the most important factor, significantly and positively correlated to mother's intuitive parenting ($r = .31$, $p < .05$), father's intuitive parenting ($r = .31$, $p < .05$), couple cooperation ($r = .39$, $p < .01$), and family warmth ($r = .37$, $p < .01$). In other words, when mothers were more highly educated, they were also more likely to demonstrate intuitive parenting behaviors, as were their partners. These mothers were also more likely to be part of couples that showed more cooperation and family warmth.

Coparenting in the family of origin also emerged as an important predictor of coparenting prebirth. Quality of coparenting in the mother's family of origin was positively related to father's intuitive parenting ($r = .28$, $p < .05$), and significantly and positively related to couple cooperation ($r = .41$, $p < .01$) and family warmth ($r = .42$, $p < .01$). This means that when mothers viewed their own parents as cooperative and supportive of one other's parenting (therefore demonstrating a more positive coparenting relationship), their partners were more likely to exhibit intuitive parenting and their families of procreation were more likely to be characterized by warmth and cooperation.

Lastly, benevolent sexism in mothers was negatively correlated to couple cooperation at the trend level ($r = -.24$, $p < .10$). Mothers who received higher scores on benevolent sexism were more likely to endorse statements such as, "in a disaster, women ought to be rescued before men." These women were also slightly more likely to come from less cooperative couples.

It is important to note that beliefs about paternal roles and hostile sexism were not related to any measure of prebirth coparenting or maternal gatekeeping. This means that

mothers who viewed mothers' and fathers' roles similarly or demonstrated less hostile sexism (endorsed beliefs that women seek power and control) were not found to have a significantly more adaptive coparenting relationship or less maternal gatekeeping.

I then repeated these analyses while controlling for social desirability. This was a necessary control, as mothers may have been unwilling to truthfully report negative aspects of the coparenting relationship in their families of origin or beliefs that they feel are socially undesirable (such as traditional beliefs about the roles of mothers and fathers or hostile and benevolent sexism). The correlations between maternal coparenting in the family of origin and maternal gatekeeping and coparenting were reduced in strength after controlling for social desirability. Still, father's intuitive parenting ($r = .26$, $p < .10$), couple cooperation ($r = .38$, $p < .01$), and family warmth ($r = .34$, $p < .05$) were positively related to maternal coparenting in the family of origin, either significantly or at the trend level. On the other hand, the strength of the correlation between maternal benevolent sexism and couple cooperation was increased after controlling for social desirability ($r = -.28$; $p < .05$). In other words, we found that mothers who endorsed statements characteristic of benevolent sexism were significantly less likely to have cooperative prenatal family relationships after taking social desirability into account.

Moderating Effects of Maternal Education

Regression analyses were conducted to test maternal level of education as a moderator of the relation between maternal quality of coparenting in the family of origin and prenatal coparenting and maternal gatekeeping. Maternal education was not found to moderate the relation between maternal quality of coparenting in the family of origin and prenatal maternal gatekeeping or most aspects of the prenatal coparenting relationship.

However, results showed that education did moderate the relationship between coparenting in the family of origin and one specific aspect of the current coparenting relationship, couple cooperation ($\beta = -.21$, $p < .10$). This means that the association between the quality of coparenting in the mother's family of origin and couple cooperation depended on the mother's level of education. As shown on Figure 2, the slope for the line representing mothers with low education was significantly different from zero ($\beta = .50$, $p < .01$). This demonstrates that when mothers have a low level of education, the quality of coparenting in their family of origin is significantly related to cooperation between them and their partners. On the other hand, the quality of coparenting in the mother's family of origin has almost no effect on couple cooperation in families of mothers with higher levels of education, as is demonstrated on Figure 1. The slope of this line is near zero, and not statistically significant ($\beta = .04$, $p = .85$). This confirms maternal level of education as a moderator of the association between coparenting in the family of origin and couple cooperation.

Discussion

Overall, the findings of this study reveal that it is possible to observe and predict components of the coparenting relationship prebirth. This approach is relatively novel, although some research has been conducted examining parents' prebirth expectations and imaginings in relation to their adjustment postbirth. For example, McHale et al. (2004) asked expectant couples about their mental representations of their future families. Couples with more positive expectations for the transition and imaginings of the future triad were better adjusted at postbirth assessments. This association was maintained even when controlling for infant temperament, demonstrating that parents' qualities and

expectations before the birth of a child remain influential after the birth. von Klitzing and Bürgin (2005) and Favez, Frascarolo, and Fivaz-Depeursinge (2006) reported similar findings. Both studies examined parents' triadic capacity (defined as their ability to incorporate one another into play as a threesome with their child) by tapping their imaginings of the future family and observing parents during the Prenatal Lasuanne Trilogue Play, respectively. Results showed that parents were either able or unable to imagine or interact as a triad, with couples capable of triadic play demonstrating more positive postnatal adjustment at subsequent assessments.

While these studies provided evidence to support the theory that characteristics of parents before the birth of their child influence their adjustment after the birth, none of them examined prebirth characteristics in relation to the already developing prenatal coparenting relationship. That approach was unique to this study, with interesting implications. Parent characteristics prebirth were able to predict aspects of the coparenting relationship, including mothers' and fathers' intuitive parenting, couple cooperation, and family warmth. It is important to note that no one factor significantly predicted maternal negative control or facilitation, the aspects of maternal gatekeeping examined in this study. This may be because maternal gatekeeping is a complex phenomenon, influenced by many factors. Additionally, mothers may be less likely to exhibit these behaviors within the context of the prenatal LTP than in other assessments possible after the birth of the child. Still, as mentioned before, predictors emerged for other aspects of the coparenting relationship. Because maternal gatekeeping is another component of this relationship, there is reason to believe that the two constructs are

highly intertwined. Perhaps with a larger sample significant associations would have emerged with maternal gatekeeping as they did with coparenting.

Specifically, maternal education was one prebirth characteristic found to predict aspects of the prenatal coparenting relationship. Originally I had hypothesized that maternal education would predict less maternal negative control and more maternal facilitation. Although this hypothesis was not realized, maternal education was significantly and positively related to mother's intuitive parenting, father's intuitive parenting, couple cooperation, and family warmth. In other words, although maternal education did not have a statistically significant effect on maternal negative control and facilitation, couples in which the mother had a higher level of education were more likely to exhibit a more positive coparenting relationship. This is in line with previous research. Both DeLuccie (1995) and Gaunt (2008) found that lower maternal education predicted higher levels of maternal negative control. Additionally, Deary et al. (2008) demonstrated that a higher level of education is associated with increased perspective taking, more progressive family roles, and more positive models for relationships. This is similar to Van Egeren's (2003) findings that mothers and fathers were more satisfied with the coparenting relationship when they had higher levels of education and ego development. So although I was unable to predict maternal gatekeeping, maternal education predicted aspects of the coparenting relationship in ways similar to the patterns found in relevant research.

Coparenting in the mother's family of origin emerged as a predictor of aspects of the current coparenting relationship as well. When mothers reported higher quality coparenting in their families of origin, they and their partners were also more likely to

receive higher scores for father's intuitive parenting behaviors, couple cooperation, and family warmth. This finding is not surprising in light of recent research. McHale at al. (2004) and von Kiltzing and Bürgin (2005) demonstrated similar associations between coparenting in the family of origin and the family of procreation among parents postbirth. They argue that exposure to cooperative models of family interaction in the family of origin leads to more positive expectations for the future family, and therefore better adjustment across the transition to parenthood. My results are a promising extension of these findings. It appears that the quality of coparenting in the family of origin impacts family relationships even before the birth of the child. So although my original hypothesis that higher quality coparenting in the mother's family of origin would predict less negative control and more maternal facilitation did not hold true, a highly related trend emerged.

I also expected that higher levels of ambivalent sexism in mothers would predict higher maternal negative control and lower maternal facilitation. This hypothesis was in line with research that demonstrates an association between sexism and traditional beliefs about gender roles and father involvement (Allen & Hawkins, 1999; Hoffman & Moon, 1999). Although this hypothesis was not supported, an interesting trend emerged regarding maternal benevolent sexism and couple cooperation. When mothers were higher on benevolent sexism (i.e., beliefs that women are more "pure" and "nurturing" than men), their interactions were less likely to be characterized by couple cooperation. This pattern became statistically significant after controlling for social desirability, perhaps indicating that some mothers may have more strongly endorsed benevolent sexism than they were willing to admit. As predicted, these beliefs had negative

implications for family interactions. Although there was no discernable relation between maternal sexist beliefs and maternal gatekeeping, the negative correlation between benevolent sexism and couple cooperation demonstrates that this is still an important factor to consider.

Finally, my expectation that maternal education would moderate the relation between quality of coparenting in the mother's family of origin and maternal gatekeeping was supported in similar ways. Education was not shown to moderate the relation between coparenting in the family of origin and maternal gatekeeping. However, it moderated the relation between quality of coparenting in the family of origin and couple cooperation such that quality of coparenting in the mother's family of origin was only associated with couple cooperation in families in which the mother had a lower level of education. This supports findings from other research. Specifically, Stright and Bales (2003) found that maternal education moderated the association between the quality of coparenting in the mother's family of origin and the current quality of coparenting in families with preschool aged children. They hypothesized that this was because mothers with higher levels of education were able to replace any negative models of interaction from their family of origin. The findings from the two studies are complementary, demonstrating that the effects of education and quality of coparenting in the family of origin are evident as early as before the birth of a child and as late as his/her preschool years.

It is also interesting to note that couple cooperation correlated more strongly and with more variables than any other aspect of the coparenting relationship. This is not surprising, giving the existing literature. Couples were coded as highly cooperative when

they actively engaged one another, either through conversation or through efforts to co-construct a game during the prenatal LTP task. This aspect of our conceptualization of prebirth coparenting is the most similar to triadic capacity, as previously defined (McHale et al., 2004; von Kiltzing and Bürgin, 2005). It is promising that we were able to observe and predict these patterns even before the birth of a child, a time that is both crucial to subsequent family life and more open to change and intervention.

Although this study provided unique insight into coparenting prebirth, it was not without limitations. The sample included in these analyses was relatively small (n = 56), limiting its statistical power. This is largely because the intensive nature of the study (a combined survey and observational design) made data collection slow and laborious. However, this sample is part of a larger study, which will eventually include over 200 couples at four time points (during the third trimester of pregnancy, as well as at 3, 6, and 9 months postbirth). Once the full sample has completed the first phase of the study, more sophisticated analyses will be conducted to further explore the preliminary findings presented here. Another limitation was that the sample was relatively wealthy and highly educated, reducing the generalizability of the results. Still, the couples were not homogenous, as demonstrated by the 11% rate of cohabitation. As the larger study progresses—with funding specifically allocated to recruit a more diverse sample with higher rates of cohabitation—the trends presented here are likely to become more dramatic. This is particularly true of the findings related to maternal education. Maternal education was found to directly predict aspects of prebirth coparenting as well as to moderate the relation between coparenting in the mother's family of origin and coparenting in the family of procreation. This emerged despite a highly educated sample

(*Mdn* = Bachelor's degree), making it likely that more variability in maternal education would result in an even larger discrepancy.

Finally, the prenatal LTP is a brief and somewhat artificial task. Each couple interpreted the instructions in a unique way (common approaches included talking through what parents believed they "would do" after the birth, emotionally engaging in the role play, or approaching the task with little seriousness). This made coding challenging, requiring many hours of training and meetings to come to a consensus. Additionally, little maternal negative control was observed in the sample included in this study. More variability has been recorded since, however, which may make it easier to detect correlates of these behaviors in future analyses. Still, despite these setbacks, maternal characteristics were related to prebirth coparenting. It is possible that this construct—defined by cooperation and warmth between expectant parents—is more obvious prebirth and therefore was more easily observed during the prenatal LTP task.

This study revealed many avenues for future research. Although my hypotheses regarding maternal characteristics and prebirth maternal gatekeeping were not realized, results demonstrated that it is possible to observe and predict patterns of coparenting prior to the birth of a child. Future research should use this possibility to examine how prebirth coparenting patterns impact family adjustment postbirth. Current research reveals that more positive imaginings and expectations for the future family are associated with better postbirth adjustment (McHale at al., 2004; von Kiltzing & Bürgin, 2005). However, little research has studied the stability of coparenting patterns from before to after the birth (for an exception, see Favez et al., 2006). It is likely that coparenting before the birth of a child will predict postbirth coparenting, however these

patterns of interaction are complex and cannot be assumed. Finally, future research should further investigate maternal gatekeeping prebirth. It is surprising that no variable was able to predict prebirth maternal gatekeeping when significant patterns emerged with prebirth coparenting, a highly related construct. Once the full sample has completed the larger study, these analyses should be conducted again. Additionally, future research outside of the larger study should investigate maternal gatekeeping through another, possibly less artificial measure. It is difficult to imagine what that might be, but the brevity and open-endedness of the prenatal LTP is likely to have impacted the results.

Despite its flaws and possibilities for improvement, this study has promising implications for practice. Parents are likely to be more flexible in their interactions—especially their expectations for triadic interactions—before the birth of their child. This possibility, along with the notion that coparenting can be observed and predicted prebirth, can inform practice. It is possible that parents can be identified as "at risk" for negative coparenting patterns even before the birth of their child. Intervention during the pregnancy, then, can help them learn to overcome negative influences (such as poor coparenting in the family of origin) and develop positive coparenting patterns. Such intervention is likely to be more effective during this "critical period" in the family lifespan (a time when new patterns of behavior and interaction emerge in preparation for the traid; Cannon et al., 2008). With further investigation into prebirth coparenting and maternal gatekeeping, successful programs can be developed to help couples address difficult family topics before adding the stress of a baby.

Overall, this study was very unique in its approach and promising in its findings. Although maternal gatekeeping still remains difficult to predict and understand, the

results provided insight into prebirth coparenting, a highly related construct. This knowledge can be used to guide future research as well as practice with expectant parents. Perhaps these measures will help couples achieve the egalitarian coparenting relationships that are desired by many and necessitated by the prevalence of the dual-earner family.

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Table 1

Means and Standard Deviations of Study Variables

	M/*Mdn*	*SD*	*Range*
Maternal Characteristics			
Level of Education	Bachelor's Degree	N/A	Vocational - PhD
Coparenting in Family of Origin	3.73	1.01	1.00 – 5.00
Beliefs about Parental Roles	4.30	.38	3.34 – 4.86
Benevolent Sexism	2.66	1.03	1.00 – 5.30
Hostile Sexism	2.55	1.03	1.00 – 5.20
Total Ambivalent Sexism	2.61	.99	1.00 – 4.83
Social Desirability	1.55	.18	1.14 – 1.90
Prenatal Coparenting and Maternal Gatekeeping			
Maternal Negative Control	1.77	.94	1.00 – 5.00
Maternal Facilitation	2.41	1.10	1.00 – 5.00
Mother's Intuitive Parenting Behaviors	3.57	.89	2.00 – 5.00
Father's Intuitive Parenting Behaviors	3.04	.95	1.00 – 5.00
Couple Cooperation	3.66	1.02	1.00 – 5.00
Family Warmth	3.82	1.11	1.00 – 5.00

Table 2

Associations between Maternal Characteristics and Prebirth Maternal Gatekeeping and Coparenting Behaviors

	Maternal Negative Control	Maternal Facilitation	Mother's Intuitive Parenting	Father's Intuitive Parenting	Couple Cooperation	Family Warmth
Mother's Characteristics						
Level of Education	-.11	.22	**.31***	**.31***	**.39****	**.37****
Coparenting in the Family of Origin	-.05 (-.04)	.01 (-.00)	.20 (.20)	**.28* (.26^{+})**	**.41** (.38**)**	**.42** (.34*)**
Beliefs about Parental Roles	.18 (.15)	-.16 (-.10)	-.22 (-.13)	-.08 (.05)	-.04 (.01)	.03 (.11)
Benevolent Sexism	.01 (-.01)	.01 (-.07)	.06 (.03)	-.05 (-.12)	**-.24^{+} (-.28*)**	-.02 (-.08)
Hostile Sexism	-.06 (-.10)	-.15 (-.17)	.01 (-.04)	-.06 (-.05)	-.13 (-.15)	-.05 (-.07)
Total Ambivalent Sexism	-.04 (-.04)	-.05 (-.09)	.08 (.05)	-.02 (-.07)	-.16 (-.16)	-.00 (-.05)

$^{+}p < .10$ *$p < .05$, **$p < .01$

Note. Values in parentheses control for Social Desirability, measured using the Marlowe-Crowne measure.

Figure 1

Arial View of the Prenatal Lasuanne Trilogue Play Setup

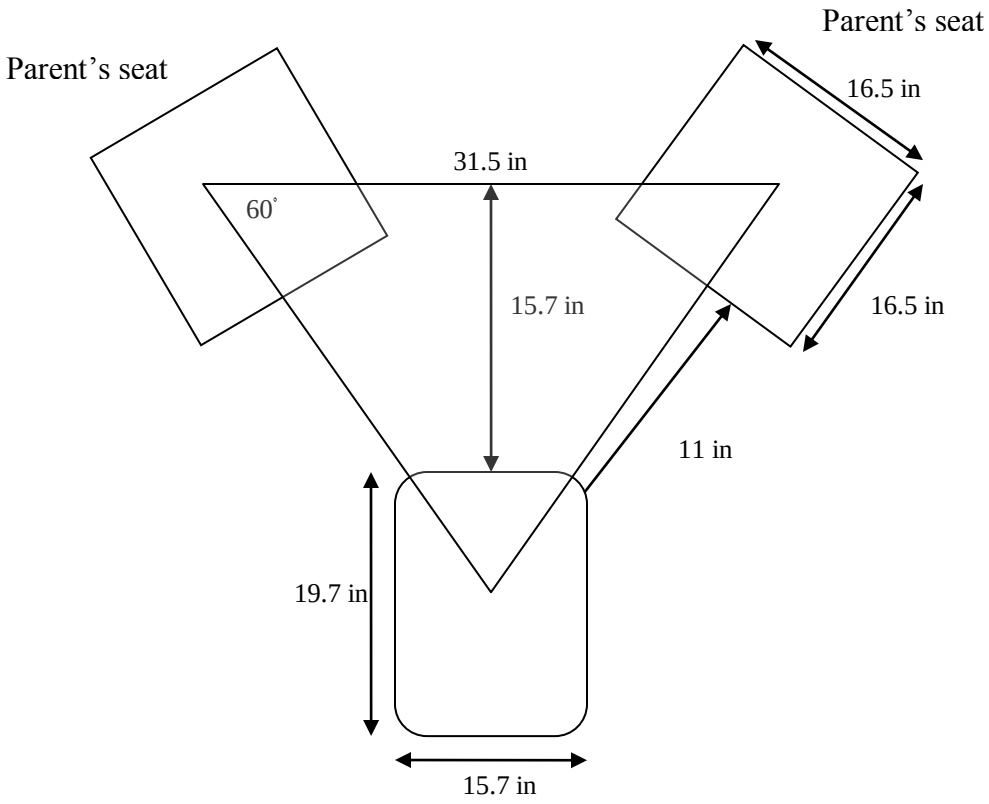

Table on which the baby's seat is fixed

Appendix

Coparenting in the Family of Origin

The following statements ask you to reflect on the family you grew up in. You do not need to remember specific incidents, just overall patterns. Please choose the number that most closely corresponds to the general practices in your family.

	Never	Infrequently	Sometimes	Frequently	Always
1. My parents supported each other's parenting.	1	2	3	4	5
2. My parents gave me conflicting messages when parenting me.	1	2	3	4	5
3. My parents used parenting techniques that they knew the other did not want them to use.	1	2	3	4	5
4. My parents backed up one another when disciplining me.	1	2	3	4	5
5. My parents competed with each other for my attention.	1	2	3	4	5
6. My parents listened to one another when one of them had something to say about me.	1	2	3	4	5
7. My parents criticized each other's parenting.	1	2	3	4	5
8. My parents worked well together raising me.	1	2	3	4	5
9. My parents ignored each other's requests for help with parenting me.	1	2	3	4	5
10. My parents argued about parenting.	1	2	3	4	5
11. My parents used similar parenting techniques.	1	2	3	4	5
12. My parents would calmly discuss parenting disagreements.	1	2	3	4	5

Beliefs Concerning the Parental Role Scale

Please indicate the degree to which you agree or disagree with the following statements by circling the appropriate number.

	Disagree strongly	Disagree mildly	Neither	Agree Mildly	Agree Strongly
1. A father should pursue the career of his choice even if it cuts into the time he has to spend with his family.	1	2	3	4	5
2. Responsibility for the discipline of the children should be equally divided between the mother and the father.	1	2	3	4	5
3. It is more important for a mother rather than a father to stay home with an ill child.	1	2	3	4	5
4. Men should share with child care such as bathing, feeding, and dressing the child.	1	2	3	4	5
5. The mother and father should equally share in toilet training.	1	2	3	4	5
6. is mainly the mother's responsibility to make sure that the children get ready for daycare/school in the mornings.	1	2	3	4	5
7. In general, the father should have more authority than the mother in deciding what extra-curricular activities are appropriate for the child.	1	2	3	4	5
8. It's better for women with children not to work outside the home if they don't have to financially.	1	2	3	4	5
9. Fathers should attend birthing classes with their pregnant wives (partners).	1	2	3	4	5
10. Divorced men should share joint custody of their children.	1	2	3	4	5
11. Fathers should participate in the delivery (birth) of their children.	1	2	3	4	5
12. Mothers should be more involved than fathers in the physical care of the children (e.g., dressing, feeding, bathing).	1	2	3	4	5
13. Fathers should attend parent-teacher conferences.	1	2	3	4	5
14. A father's primary responsibility is to financially provide for his children.	1	2	3	4	5

	Disagree strongly	Disagree mildly	Neither	Agree Mildly	Agree Strongly
15. It is important for a father to spend quality time (one to one) with his children every day.	1	2	3	4	5
16. Fathers should attend prenatal doctor's visits with his partner (wife) (e.g., ultrasound appointment).	1	2	3	4	5
17. Fathers should take the majority of responsibility for setting limits and disciplining children.	1	2	3	4	5
18. A father should be emotionally involved with his children (e.g., nurturant, supportive, understanding).	1	2	3	4	5
19. It is mainly the mother's responsibility to change diapers.	1	2	3	4	5
20. It is equally as important for a father to provide financial, physical, and emotional care to his children.	1	2	3	4	5
21. Mothers and fathers should share equally with the late night feedings during infancy.	1	2	3	4	5
21. It is mainly the mothers responsibility to toilet train the children.	1	2	3	4	5
23. Mothers and fathers should equally share the responsibility of taking care of a sick child in the middle of the night.	1	2	3	4	5
24. When a child becomes ill at daycare/school it is primarily the mother's responsibility to leave work or make arrangements for the child.	1	2	3	4	5
25. A mother should pursue the career of her choice even if it cuts into the time she has to spend with her family.	1	2	3	4	5
26. It is more important for a father to have a successful career than it is to have a family that is closely knit.	1	2	3	4	5
27. Mothers are instinctively better caretakers than fathers.	1	2	3	4	5
28. Fathers have to learn what mothers are able to do naturally in terms of child care.	1	2	3	4	5
29. Mothers are naturally more sensitive to a baby's feelings than fathers are.	1	2	3	4	5

Ambivalent Sexism Inventory

Please indicate the degree to which you agree or disagree with each statement by circling the appropriate number:

	Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly
1. No matter how accomplished he is, a man is not truly complete as a person unless he has the love of a woman.	0	1	2	3	4	5
2. Many women are actually seeking special favors, such as hiring policies that favor them over men, under the guise of asking for "equality."	0	1	2	3	4	5
3. In a disaster, women ought to be rescued before men.	0	1	2	3	4	5
4. Most women interpret innocent remarks or acts as being sexist.	0	1	2	3	4	5
5. Women are too easily offended.	0	1	2	3	4	5
6. People are not truly happy in life without being romantically involved with a member of the other sex.	0	1	2	3	4	5
7. Feminists are seeking for women to have more power than men.	0	1	2	3	4	5
8. Many women have a quality of purity that few men possess.	0	1	2	3	4	5
9. Women should be cherished and protected by men.	0	1	2	3	4	5
10. Most women fail to appreciate fully all that men do for them.	0	1	2	3	4	5
11. Women seek to gain power by getting control over men.	0	1	2	3	4	5
12. Every man ought to have a woman whom he adores.	0	1	2	3	4	5
13. Men are incomplete without women.	0	1	2	3	4	5
14. Women exaggerate problems they have at work.	0	1	2	3	4	5

	Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly
15. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.	0	1	2	3	4	5
16. When women lose to men in a fair competition, they typically complain about being discriminated against.	0	1	2	3	4	5
17. A good woman should be set on a pedestal by her man.	0	1	2	3	4	5
18. Many women get a kick out of teasing men by seeming sexually available and then refusing male advances.	0	1	2	3	4	5

Social Desirability

Please read the statements concerning personal attitudes and traits. Please indicate whether each statement is true or false as it pertains to you personally by **CIRCLING T (true) or F (false)**.

1. I'm always willing to admit it when I make a mistake.	T	F
2. I always try to practice what I preach.	T	F
3. I never resent being asked to return a favor.	T	F
4. I have never been irked when people expressed ideas very different than my own.	T	F
5. I have never deliberately said something that hurt someone's feelings.	T	F
6. I like to gossip at times.	T	F
7. There have been occasions when I took advantage of someone.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. At times I have really insisted on having this my own way.	T	F
10. There have been occasions when I felt like smashing things.	T	F

Scales for Coding Prenatal LTP

Intuitive Parenting Behaviors – Father and Mother
This scale assesses parents' use of six parenting behaviors identified in the literature as intuitive*: holding or facing the baby, dialogue distance, baby-talk and/or smiling at the baby, caressing and/or rocking, exploring the baby's body, and preoccupation with the baby's well-being. Each parent will be scored separately based on the frequency, number, and quality of behaviors exhibited.*

1 = The parent displays no intuitive parenting behaviors. They may seem to have little knowledge of how to approach the baby or appear entirely disinterested in the task.
2 = The parent displays 1 to 2 parenting behaviors, but they are not consistently present throughout the entire episode, and the parent does not appear to be confident/comfortable in their actions.
3 = Up to 3 parenting behaviors are present, but repeated/maintained only a few times throughout the play; or the parent may have a fairly limited repertoire of behaviors. The parent appears to have a sense of what they are doing, but he/she also displays some self-doubt (e.g., the parent starts a game with the baby but then looks up for reassurance).
4 = The parent shows 3 to 5 different intuitive parenting behaviors and repeats/maintains the majority of them throughout the episode. The parent is mostly confident and natural in his/her actions, though may display some self-doubt or reservation once or twice.
5 = The parent displays 5 to 6 parenting behaviors. These are consistently maintained/repeated throughout the episode and the parent is comfortable/natural using them.

Couple's Cooperation
This scale assesses the degree of active cooperation between the parents during the play, at a behavioral level. This is about more than the absence of antagonism or interference. To receive a high score, parents must clearly demonstrate behaviors intended to involve and support one another and facilitate joint play.

1 = The parents display no sincere cooperative efforts throughout the episode. Furthermore, they criticize or antagonize each other through interruption and offending or critical remarks about the other parent's play. These actions prevent the couple from co-constructing the play.
2 = Few (if any) critical or antagonizing remarks are made throughout the episode, however the parents are not working together effectively. They are doing different things with the doll, and while they are not interrupting one another, they are also not adjusting their actions according to their partner's. For example, during the joint play, after one parents picks up the doll, plays with it, and sets it back down, the other partner picks up the doll and begins a completely new game.
3 = The couple cooperates in some, but not all parts of the play. For example, they may at first have some difficulty coming to an agreement about what game to play during Part 3, but they eventually resolve this and are able to work together. A score of 3 may also be awarded when there are large differences between the partners such that one engages in the play and makes attempts to cooperatively involve everyone, but the other parent does

not return these efforts or engage in the task. A score of 3 may also be appropriate if the couple seems to be neutral.
4 = The couple demonstrates clear, active cooperative efforts at various points during the play. Though there may be some lags in the episode (most likely during transitions between phases), the couple is able to recover and support one another, and interruptions or distractions are minimal. For example, the observant parent may hesitate to involve him or herself at the beginning of Part 3, but the couple quickly recovers and finds a way to play jointly.
5 = There is a clear indication of active cooperation between the parents. This can take the form of gestures and words that facilitate joint play (e.g., "do you want me to hold her and you can play peek-a-boo?") or mutual support between the partners. The end result is that the couple is able to execute all four parts of the play warmly and cooperatively.

Maternal Negative Control
On this scale, mothers will be rated for their overall negative control, based on both their verbal and nonverbal behavior during the episode as well as the intent of the message given. A mother who receives a score of 1 will show no signs of negative control, while a mother who receives a score of 5 will show many signs of negative control. Negative control is defined as any behavior that may limit the father's interaction with the "baby". For example, the mom may demonstrate her expertise in handling the doll, her lack of confidence in the father's abilities, or her desire to monopolize the duration of the episode.

1 = No negative controlling behaviors are exhibited over the course of the videotaped segment (nothing even subtle).
2 = Some mild negative controlling behavior might be noted over the course of the episode. The behavior is very subtle and is alluded to in her facial expressions or posture. For example, the mother may lean forward or make a subtle face at several points during the father's solo play, indicating her hesitation to take an observational role. A score of 2 may also be necessary when the mother plays with the baby for a significant amount of time longer than the father (especially if she plays with the baby first). More consistent behavior like this would likely receive a higher score.
3 = Some moderate negative controlling behavior is directly expressed over the course of the episode. This negative controlling behavior, however, is relatively low in intensity. For example, the mother may make a joke or light comment about something the father is doing that reveals that she knows how more about caring for infants, despite the fact that neither of them have parenting experience (e.g.: "Careful with my head, daddy" [Mom said through baby]). She demonstrates a stronger hesitance to take an observational role by continuously leaning forward or keeping a stern face. One clear example, or several more subtle examples, of this behavior would get a "3."
4 = Some fairly strong negative controlling behavior is noted over the episode. It seems to affect the father's performance (possibly reflected by him having a shorter alone segment due to a **specific** action of the mother, or by his lack of opportunity to be involved in part 3). The mother may also express her disproval of the father's actions or demonstrate that she is more knowledgeable about childcare in a strong and negative tone

(e.g., "you're supposed to watch a baby's head"). Her posture and facial expressions may be rigid as she watches the father interact with the doll, affecting the ease of his play.
5 = Some very intense negative controlling behaviors are noted. Moreover, no effort is made to lighten up or disguise this behavior. Several moderate intensity gestures or comments might be made throughout the entire episode, or one dramatic example of negative controlling behavior might be noted (e.g.: Mother watches the father perform a task a warns him, "you know I'm not letting you do that with our real baby;" comments like this are also likely to appear in Part 4). Importantly, the mother's efforts to limit the father's involvement in the play are successful. His segment is either nonexistent or cut short by her interruptions and he has little opportunity to become involved in Part 3. Her behaviors characterize the episode.

Maternal Facilitation

On this scale, mothers will be rated for their overall positive support of their partners' interactions with the "baby." Maternal facilitation of father-infant interaction is defined as a mother's efforts to support and encourage his participation with the baby. She may be complimenting him, instructing him in a clearly positive manner, or helping to make his time with the "baby" more enjoyable and easy. It must be clear that her efforts to help are to promote father-infant interaction, and do not carry with them a negative edge which somehow minimizes his efforts or discourages his interaction with the "baby."

1 = No maternal facilitation behaviors are noted over the course of the videotaped segment (nothing even subtle). A score of 1 may also be appropriate if the mother's facilitation does not seem genuine (for example, she may facilitate the father's involvement simply to end the task quicker).
2 = Some mild maternal facilitation might be noted, although her input is more nonverbal or subtle. She may subtly invite the father to play during Part 3 by turning the baby basket more towards the father. Or, during the father's solo play, she may nonverbally encourage the father's actions by smiling at him if he looks to her. She is paying attention, but she is also able to sit back and allow the father to play. *Frequent* behaviors such as these would likely gain a higher rating. Verbal encouragement worthy of a score of 2 would include a light comment such as "I think it's daddy's turn!" either to transition to Part 2 or during Part 3.
3 = Some moderate maternal facilitation behavior is noted over the course of the episode, even though this behavior tends to be more subtle and low in intensity. Several examples of the types of facilitation noted for a "2", or one clear instance of facilitation (e.g.: The mother hands the doll over to the father during part 3, but goes no further to encourage his involvement). Most importantly, she is able to relinquish control and give the father a chance to play without her interruption. She maintains an observational distance and flexible posture and facial expressions.
4 = Some fairly strong maternal facilitation behavior is noted over the course of the videotaped segment. Although they are not exhibited throughout the entire task, the mother's behaviors or comments seem to be directed towards encouraging his participation in the play. She may offer help or advice several times (in both clear and subtle ways) to make interacting with the baby easier (e.g.: the mother may suggest a game to the father if he seems unable to fill his solo play time, but then sits back and

allows him to execute it). Her tone in offering or giving help must clearly be positive, and not sound the least bit critical nor condescending.
5 = Some very intense maternal facilitation behavior is noted, and is demonstrated quite dramatically throughout the entire episode. One of the mother's primary goals for the interaction seems to be involving the father now as well as in the future. Several moderately intense behaviors or comments may be made over the episode, or one very dramatic example could be displayed. For example, the mother might suggest a game that both partners can play with the infant during part 3 and then make a comment like, "you were so natural. I know you're going to be a great father when the time comes!" in part 4.

Family Warmth
This scale captures the affection and humor shared by the partners during play; namely, whether they manifest affection and tenderness as a couple toward the "baby." Also important is the parents' expressions of warmth and affection towards one another.

1 = A score of 1 is given in the absence of warmth and the expression of negative affect. Parents may not express affection towards the doll, or they may also express coldness, disdain, or contempt towards one another. Both warrant a score of 1.
2 = A score of 2 is given if there is an absence of warmth OR the expression of negative affect.
3 = Parents express warmth some of the time. They may waffle between warmth and negativity throughout the entire episode, or they may demonstrate warmth in one part and not another (for example, the parents may be warm towards the doll in Parts 1 and 2, but be distant and cold in the last two segments when they interact with each other).
4 = The couple demonstrates no negativity throughout the episode. Additionally, there is some expression of warmth, although it is inconsistent. For example, the mother may simply watch the father interacting with the doll most of the time, but occasionally smile in his direction.
5 = Parents express a high degree of warmth through tender words, complicit smiles, and warm gestures directed at both the baby and the other parent. These expressions last the entire episode, and the parents demonstrate no intentional negativity.